

## **DENTAL SCIENCE II – Benchmark 2**

### **DENTAL SCIENCES**

#### **STANDARD 1: Dental Anatomy**

**Students will demonstrate a basic understanding of human anatomy and physiology with a focus on head and neck anatomy.**

##### **OBJECTIVES:**

- 01.01 Describe body planes, directional terms, and major body cavities.
- 01.02 Identify bones of the skull and face.
- 01.03 Identify components and function of the temporomandibular joint.
- 01.04 Identify the muscles of mastication.
- 01.05 Identify the salivary glands.
- 01.06 Identify the sinuses.
- 01.07 Identify the major innervations of the face and oral cavity.
- 01.08 Identify the major blood supply to the face and oral cavity.
- 01.09 Locate the major anatomical landmarks of the face.**
- 01.10 Locate major landmarks of the oral cavity.**

#### **STANDARD 2: Tooth Morphology**

**Students will distinguish the structure and the function of the oral cavity in preparation for patient assessment.**

##### **OBJECTIVES:**

- 02.01 Identify the tissues of the teeth.
- 02.02 Identify and describe the tissues of the periodontium.
- 02.03 Describe the characteristics of normal gingival tissue and classify the depth of a healthy gingival sulcus.
- 02.04 Identify and describe the differences of the three types of dentitions.
- 02.05 Describe Angle's classification of occlusion.
- 02.06 Illustrate the teeth of the primary and permanent dentition using the Universal Numbering System.
- 02.07 Distinguish tooth identification (type, anterior or posterior, maxillary or mandibular).**
- 02.08 Identify the names and abbreviation of tooth surfaces.**

#### **STANDARD 3: Dental Disease**

**Students will identify the infectious process of dental caries, periodontal disease, oral cancer, and other oral soft-tissue diseases.**

##### **OBJECTIVES:**

- 03.01 Identify the caries process.
- 03.02 Identify the signs and symptoms of periodontal disease.
- 03.03 Identify the diseases of the oral soft-tissues including oral cancer.
- 03.04 Describe and identify developmental disturbances.

#### **STANDARD 4: Oral Health**

Students will identify the components of a comprehensive preventive dentistry program including the importance of nutrition as it relates to caries.

##### **OBJECTIVES:**

- 04.01 Explain the components of preventive dentistry.
- 04.02 Discuss techniques for educating patients in preventive care.
- 04.03 Apply appropriate personal oral hygiene.**
- 04.04 Instruct a patient in personal oral hygiene.**
- 04.05 Identify sources and benefits of fluoride.
- 04.06 Explain how diet and nutrition can affect oral conditions.
- 04.07 Explain the relationship between frequency and amount of cariogenic foods in causing tooth decay.
- 04.08 Analyze a diet diary.**

#### **STANDARD 5: Patient Assessment**

Students will manage and maintain the patient record including taking and recording vital signs, recording clinical examination as well as other aspects of business and financial operating systems.

##### **OBJECTIVES:**

- 05.01 Identify the data gathering process and analyze the components of the patient record.
- 05.02 Prepare and organize a patient record.**
- 05.03 Obtain a medical and dental health history.**
- 05.04 Demonstrate taking and recording vital signs.**
- 05.05 Identify types of cavities based on the cavity classifications developed by G.V. Black.
- 05.06 Chart the teeth.**
- 05.07 Record the completed dental treatment.**
- 05.08 Defend the patient's right to privacy (HIPAA).
- 05.09 Demonstrate the use of effective words when communicating with patients.
- 05.10 Identify how to use filing systems.
- 05.11 Describe the process of scheduling appointments.
- 05.12 Describe the function of computerized practice management systems and manual accounts receivable systems.
- 05.13 Describe claims form processing.
- 05.14 Describe the type of dental management a medically compromised patient would receive.

## **INTRODUCTION TO CLINICAL DENTISTRY**

#### **STANDARD 6: Pharmacology and Pain Control**

Students will examine pharmacology and pain control in the dental office setting.

##### **OBJECTIVES**

- 06.01 Identify the parts of a prescription.
- 06.02 Identify common prescription abbreviations.
- 06.03 Describe the classifications of prescription drugs and their effects.

- 06.04 Identify local anesthetic agents.
- 06.05 Identify injection techniques for anesthesia.
- 06.06 Identify the complications and precautions for dental anesthesia.
- 06.07 Explain the use and purpose of nitrous oxide in dental treatment.
- 06.08 Assist in the administration of local anesthesia.

#### **STANDARD 7: Direct Restorative Materials**

Students will identify use, mixing technique, set-up, and procedures for direct restorative dental materials.

##### **OBJECTIVES**

- 07.01 Identify the properties of dental materials for direct restorations including tooth whitening products.
- 07.02 Identify the indications and applications for dental liners, bases, and bonding systems.
- 07.03 Describe the type and use of matrices for anterior and posterior restorations.
- 07.04 Assemble a matrix band and universal retainer.
- 07.05 Mix and transfer dental amalgam.
- 07.06 Prepare composite resin material.
- 07.07 Mix intermediate restorative materials.
- 07.08 Demonstrate the application of calcium hydroxide.
- 07.09 Demonstrate the application of dental varnish.

#### **STANDARD 8: Indirect Restorative Materials**

Students will demonstrate the correct setup, mixing technique for dental cements, and impression materials used in fixed prosthodontic procedures.

##### **OBJECTIVES**

- 08.01 Describe luting cements, identify similarities and differences, and differentiate between permanent and temporary cements.
- 08.02 Identify the types of impression materials, trays, and mixing techniques.
- 08.03 Describe the differences among full crown, inlays, onlays, and veneer restorations.
- 08.04 Demonstrate mixing zinc phosphate for permanent cementation.
- 08.05 Demonstrate mixing polycarboxylate for permanent cementation.
- 08.06 Demonstrate mixing glass ionomer for permanent cementation.
- 08.07 Demonstrate mixing a two-paste final impression material.
- 08.08 Prepare an automix final impression.
- 08.09 Take a wax-bite registration.
- 08.10 Demonstrate mixing polysiloxane material for a bite registration.

#### **STANDARD 9: Laboratory Procedures**

Students will utilize materials and skills needed for completing in-office laboratory procedures.

##### **OBJECTIVES**

- 09.01 Identify laboratory equipment; indicate the use, maintenance and safety precautions that should be taken.
- 09.02 Discuss the gypsum products and their role in making dental models.
- 09.03 Demonstrate mixing alginate impression materials.

- 09.04 Demonstrate taking preliminary impressions.
- 09.05 Disinfect an alginate impression.
- 09.06 Demonstrate mixing dental plaster.
- 09.07 Demonstrate pouring dental models using inverted pour method.
- 09.08 Demonstrate trimming and finishing dental models.
- 09.09 Demonstrate constructing a vacuum-formed bleaching tray.
- 09.10 Demonstrate constructing of a vacuum-formed mouthguard.